WebObjects State of the Union

Session 602

WebObjects State of the Union

Wiley Hodges
Sr. Products Line Manager, Developer Products

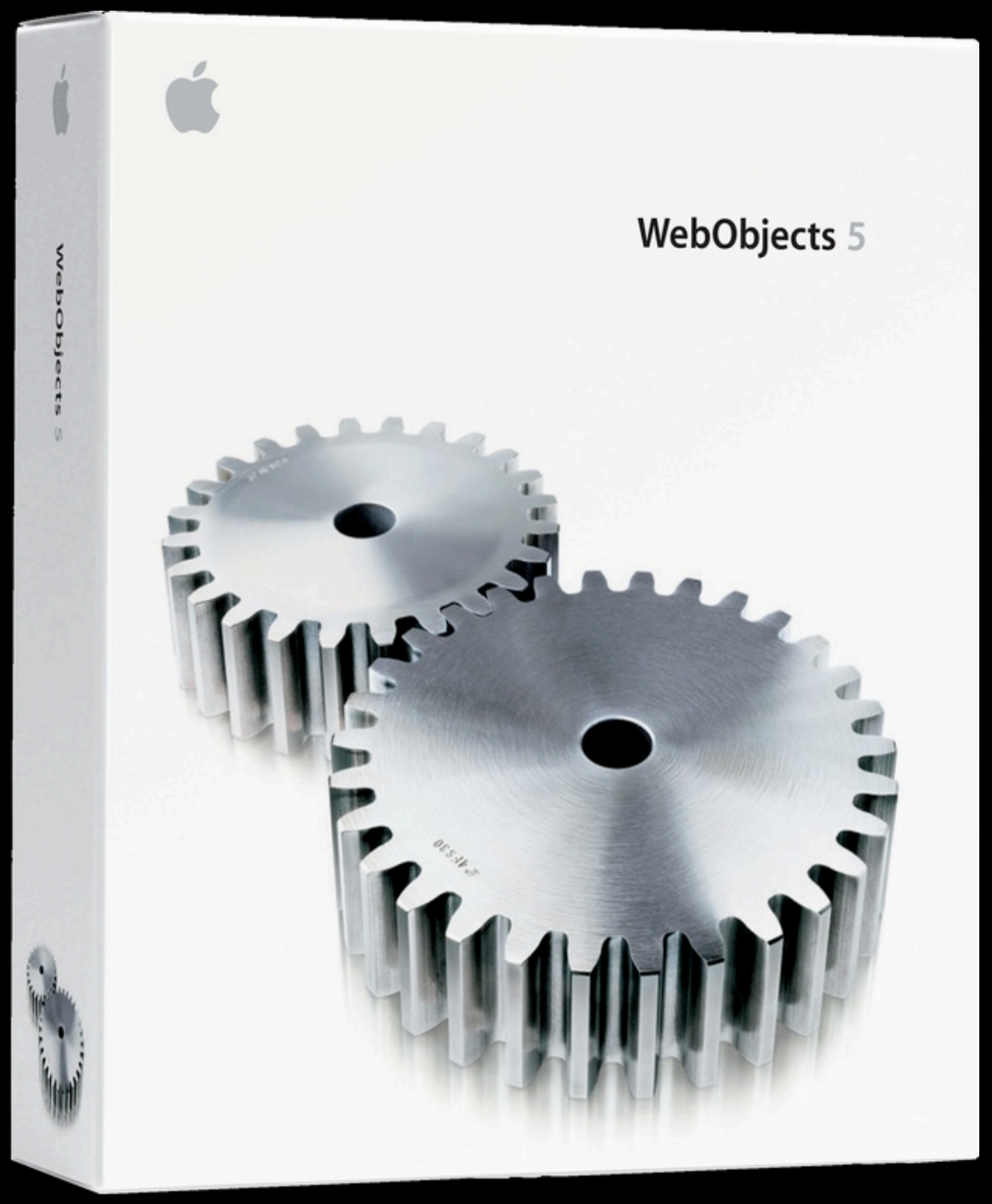
What You'll Learn

- WebObjects Overview
- WebObjects Directions
- Documentation State of the Union

WebObjects Overview

WebObjects

The Easiest way to build J2EE-compatible solutions



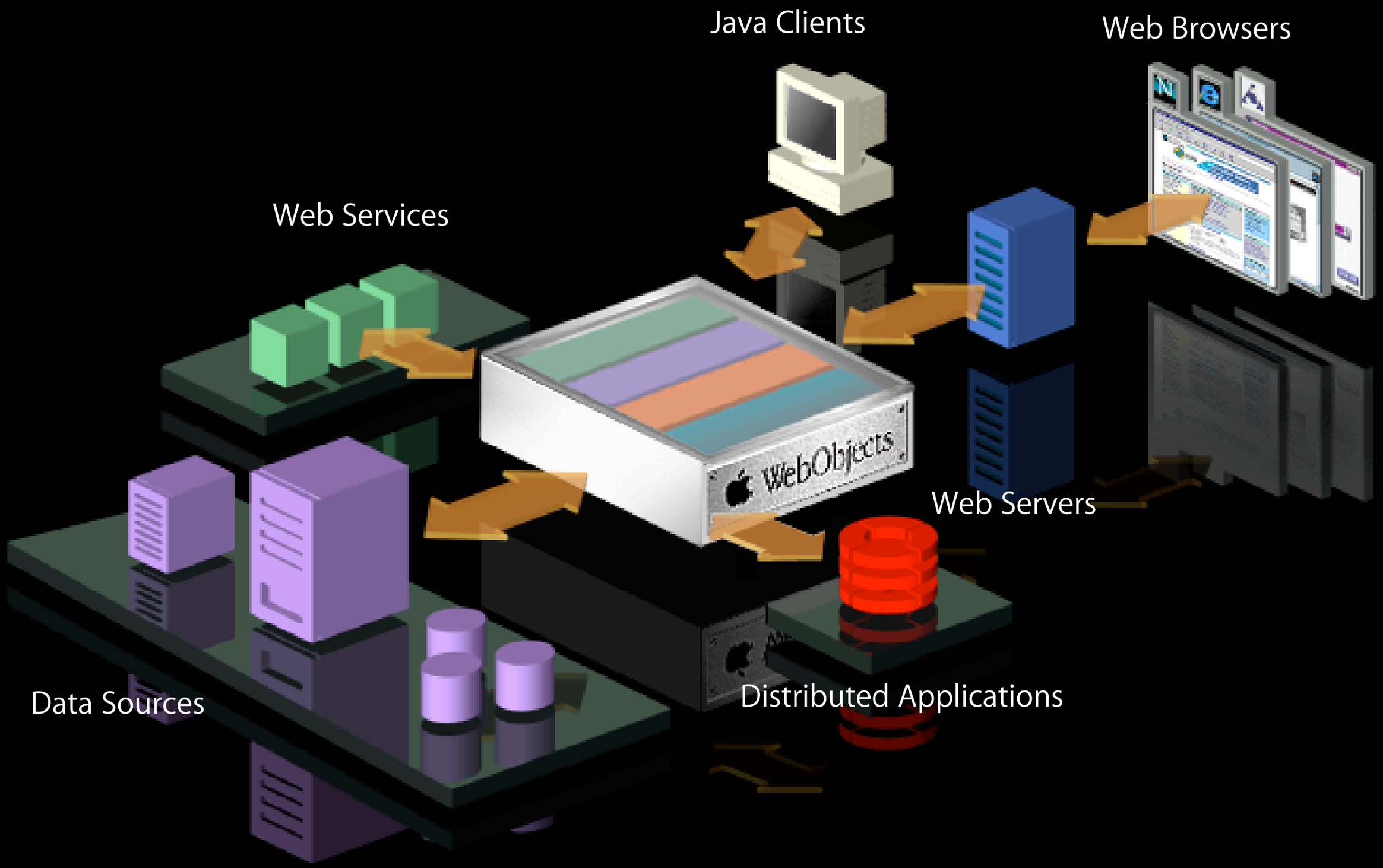
WebObjects 5.2

Everything you need to build Enterprise-class applications

- Integrated development environment
- Database mapping
- Code-free rapid prototyping
- Web services
- HTML page layout

Advantages

- Accelerates time to market:
- Allows developers to do more:
- Reduces overall cost of ownership:


Java Clients
Web Browsers
Web Services
WebObjects
Web Servers
Data Sources
Distributed Applications

WebObjects Architecture

JDBC
Database

JNDI
Directory

Java Code

Web App

Web Services Client

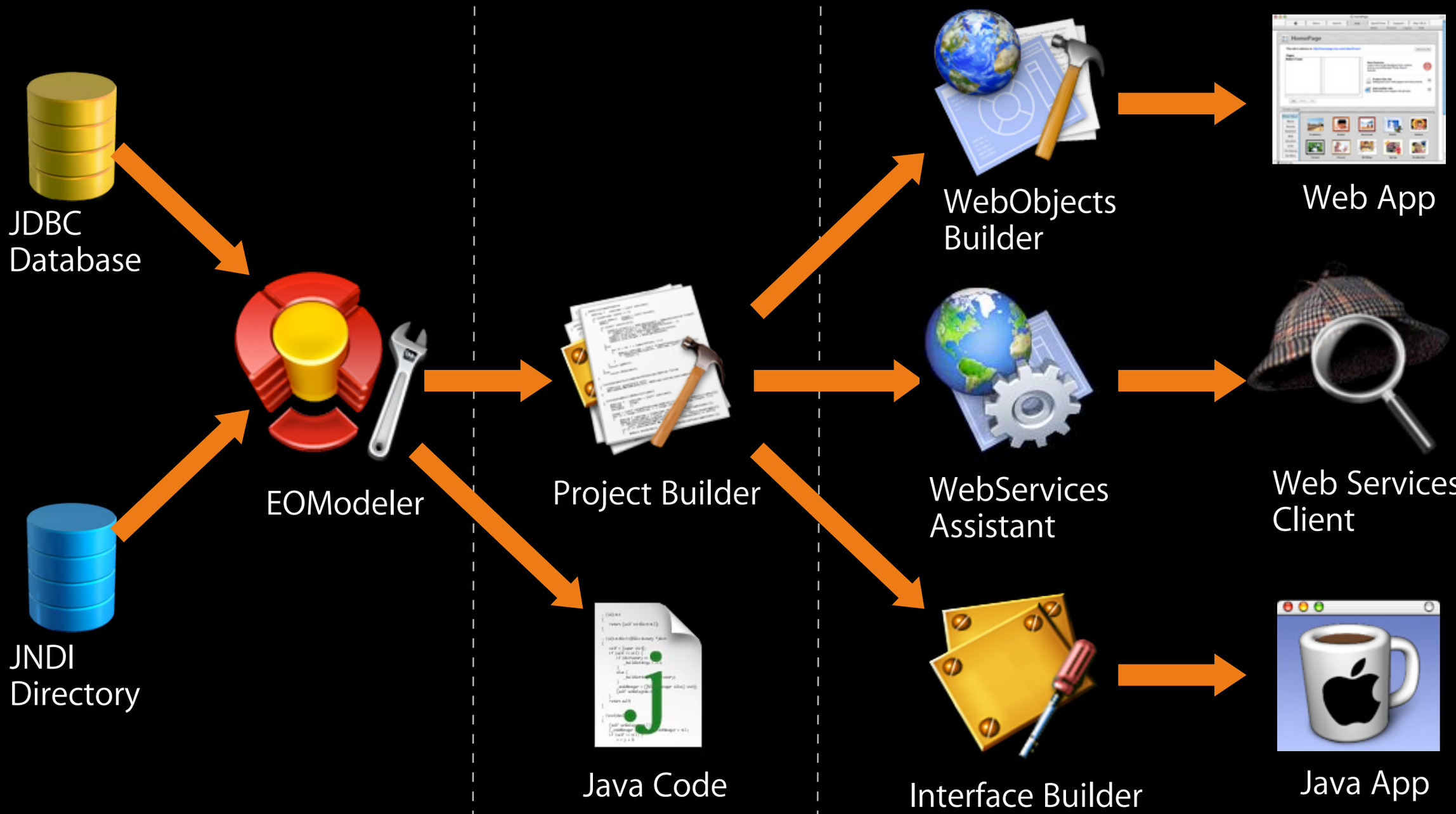
Java App

Data Access

Business Logic

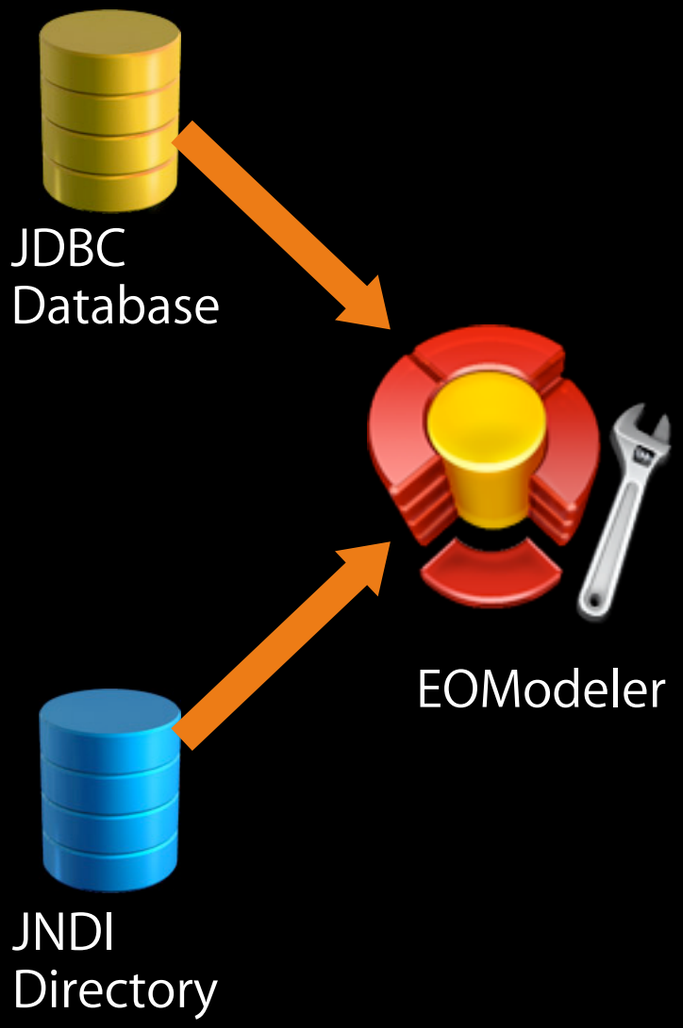
Presentation

Development Workflow



Data Access **Business Logic** **Presentation**

Building the Model



- EOModeler reverse engineers your database finding all tables, columns, and relationships

OR

- Use EOModeler for schema design
- EOModeler generates Java class files for you

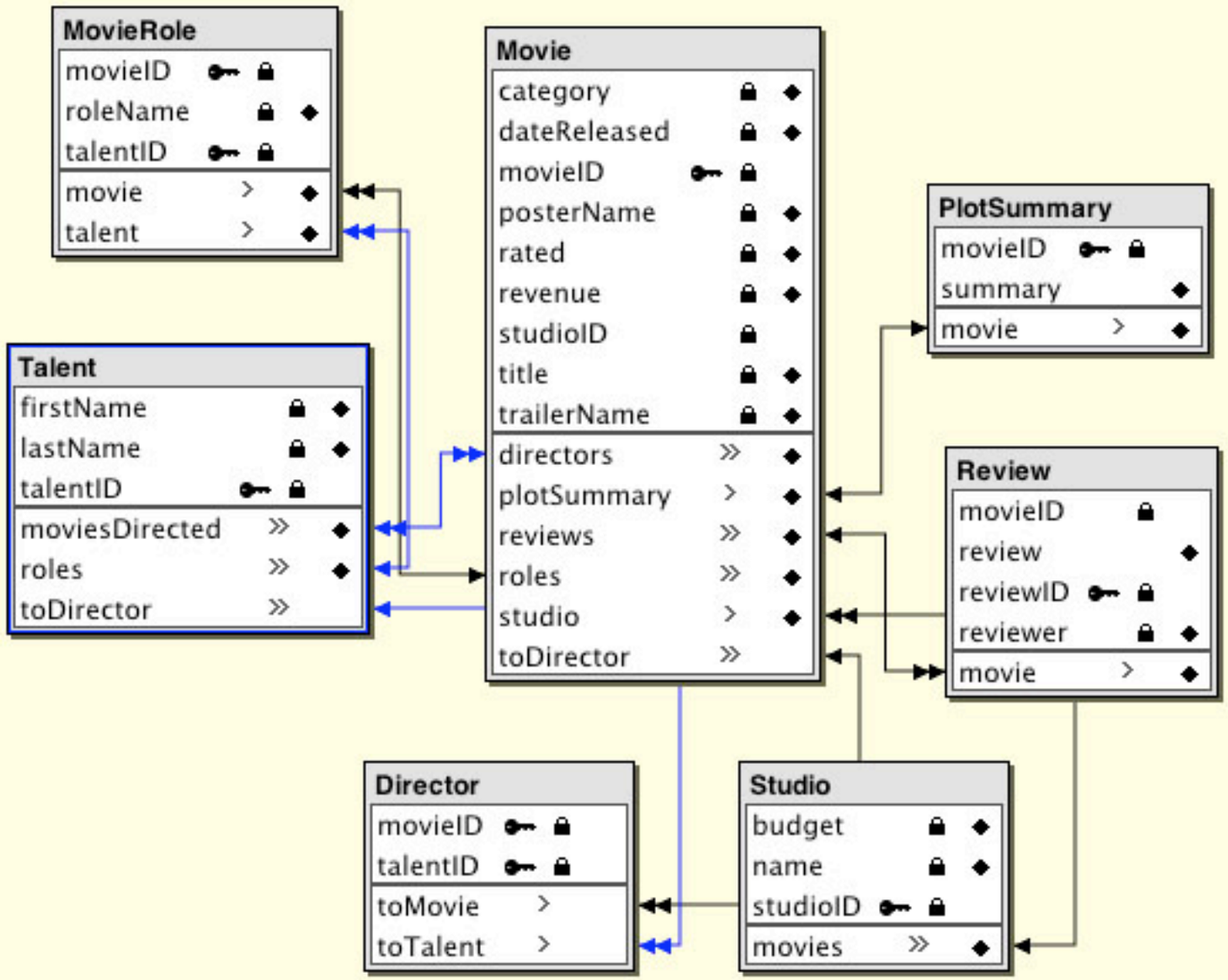
Interface Builder Model Edit Property Window Help Wed 12:10 PM

Movies.eomodeld

Movies
- Director
- Movie
- MovieRole
- PlotSummary
- Review
- Studio

Show Entity: All | Entity Chooser... | Remove Layout

Show Relationship: None | Ortho Lines ☑ Default



Entity Inspector

Name: Talent

Table Name: TALENT

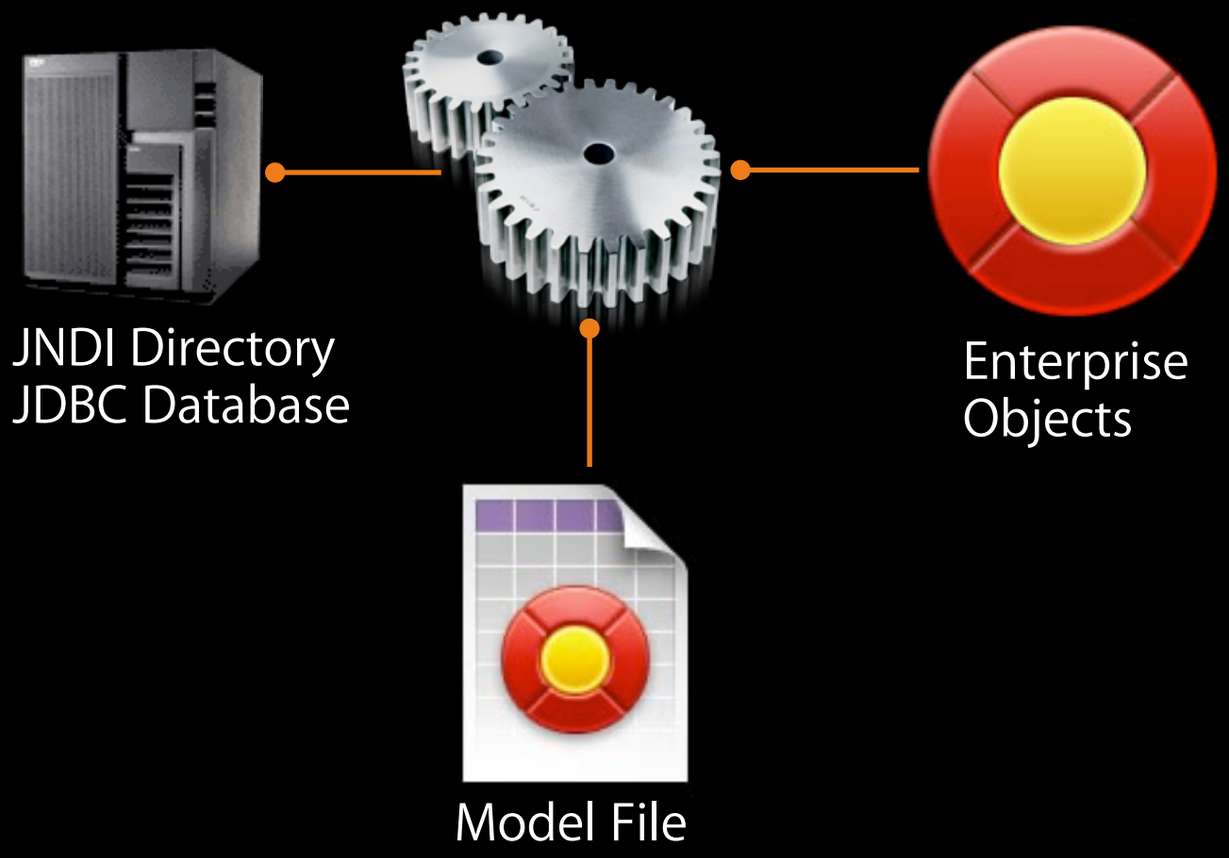
Class: webobjectsexamples.busi

Properties

	🔒	◆	firstName
	🔒	◆	lastName
🔑	🔒		talentID
—	—	◆	moviesDirected
—	—	◆	roles
—	—		toDirector

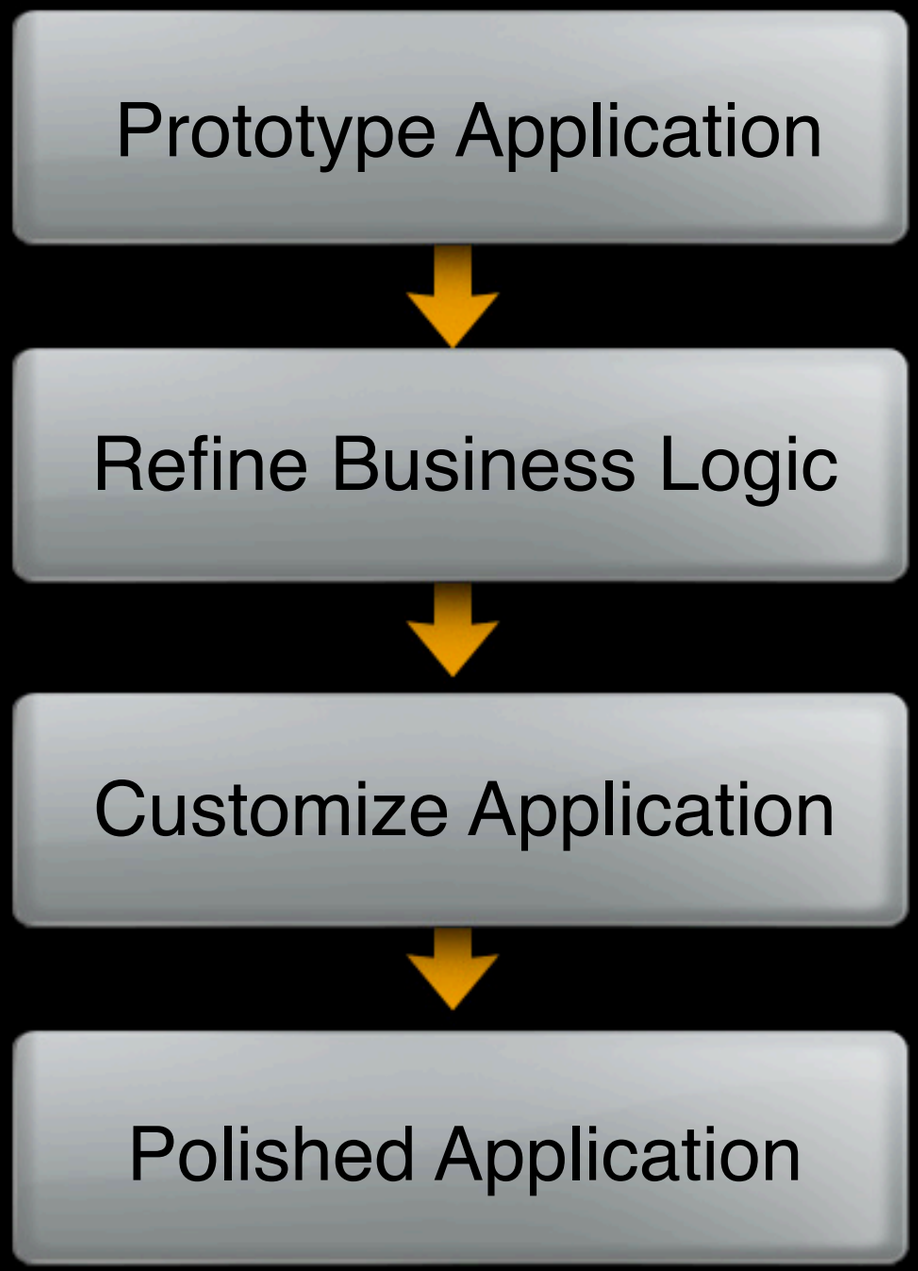
Primary Key Class Property
Used For Locking — Not applicable

Automated Data Access



- No need to write SQL
- Database independence
  - Easy to switch
  - Use several at once
- Transparent persistence

Better Development Process



Build Web Applications

WebObjects Builder

Web Application

- Graphical HTML editor
- Visual development environment to build data-driven web pages
- Palettes of reusable components

WebObjects Builder File Edit Format Elements WebObjects Forms Window Help Wed 12:10 PM

/Volumes/Data/Users/bob/Projects/Lessons.eomodeld

Lessons
Answer

Show Entity All | Entity Chooser... | Remove Layout

Ortho Lines | Default

Main.wo

None

Jefferson College Online

Robert Fraser
Instructor

Zoology 432-31
Class

Taxonomy of South American Cats

Select a species of cat:

Puma (Puma concolor)

Jaguar (Panteria onca)

Ocelot (Leopardus pardalis)

1 Where is the largest concentration of Jaguars located?
- A. Argentina
- B. Brazil
- C. Peru

2 The top speed of an adult Jaguar is:
- A. 14 kph
- B. 2 knots
- C. 18 mph

3 What is a Jaguar's natural prey?

<BODY> point

Lesson	Quiz	Author
images »	author >	email
movies »	lesson >	firstName
quiz >	maxScore	images »
theLesson	questions »	lastName
		movies »
		quizes »

Edit Source

Author
authorId
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images »
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Image
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Movie
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height
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lessonId
movieId
size
width

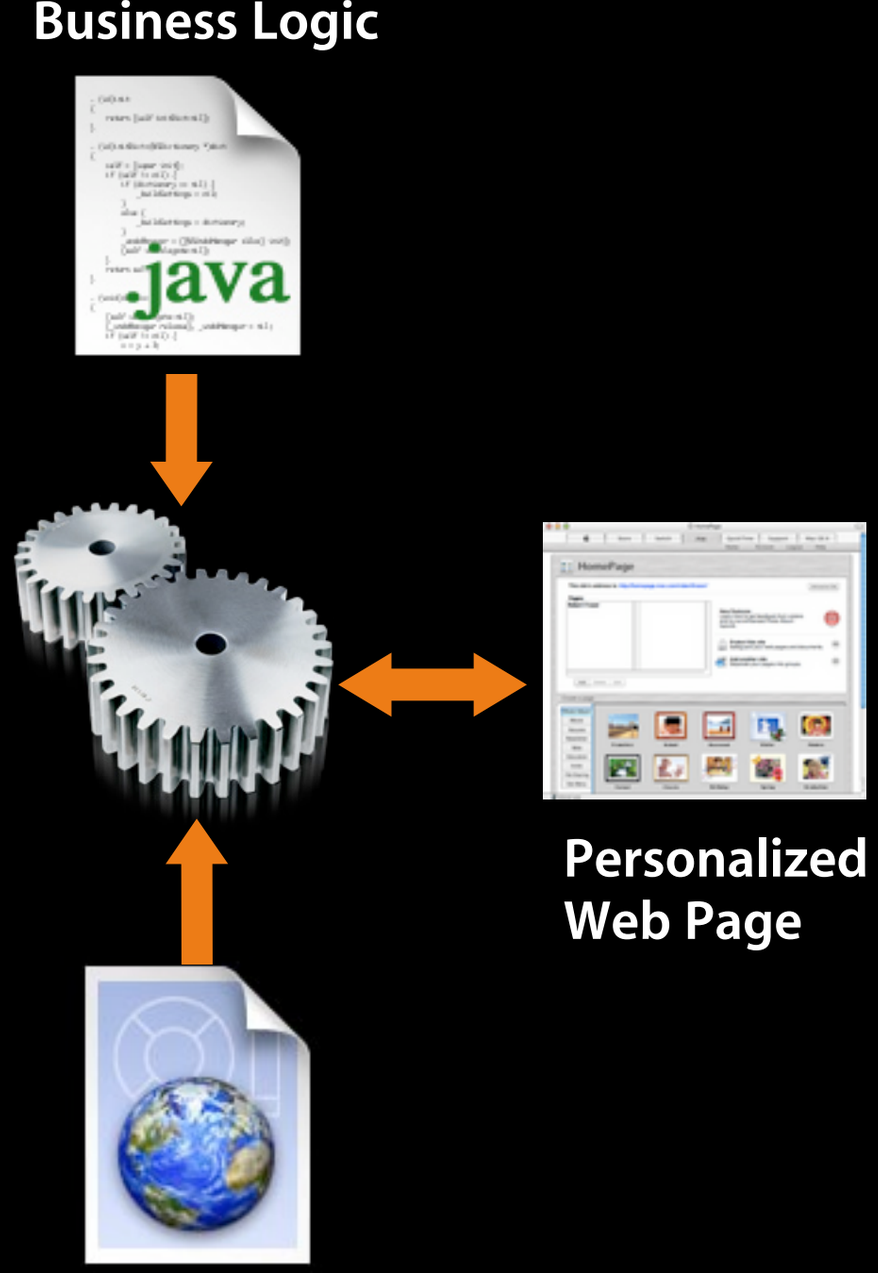
Lesson
lessonId
theLesson
images »
movies »
quiz >

PremadeElements Palette

Repeated Header
Repeated Data
Header | Header
Data | Data
Repeated List
Repeated Ratio
WOFileUpload
Submit
Radio 1
Radio 2
Radio 3
Radio 4
Radio 5
Palettes

Dynamic Pages

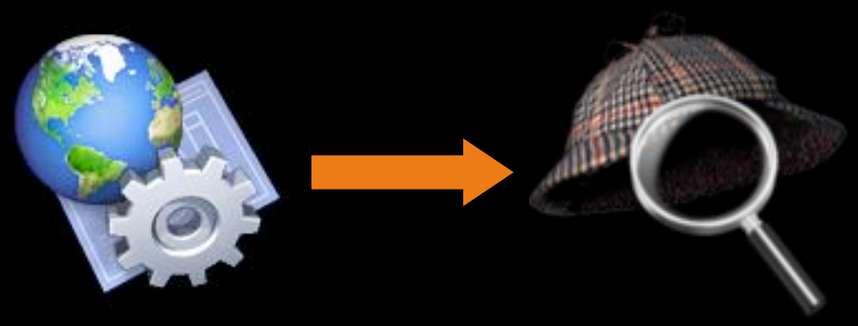
- Isolates HTML and logic from the data
- Manages sessions, users, and security
- Generates HTML, XML, or SMIL
- Interoperable with JSPs
- Localization support



Dynamic Web Services

- Standards-based web services drive application integration
- Interoperable with many languages, including AppleScript, Perl, C++, Cocoa, Java, and .Net
- Empowers a new class of programmers and users

Build Web Services

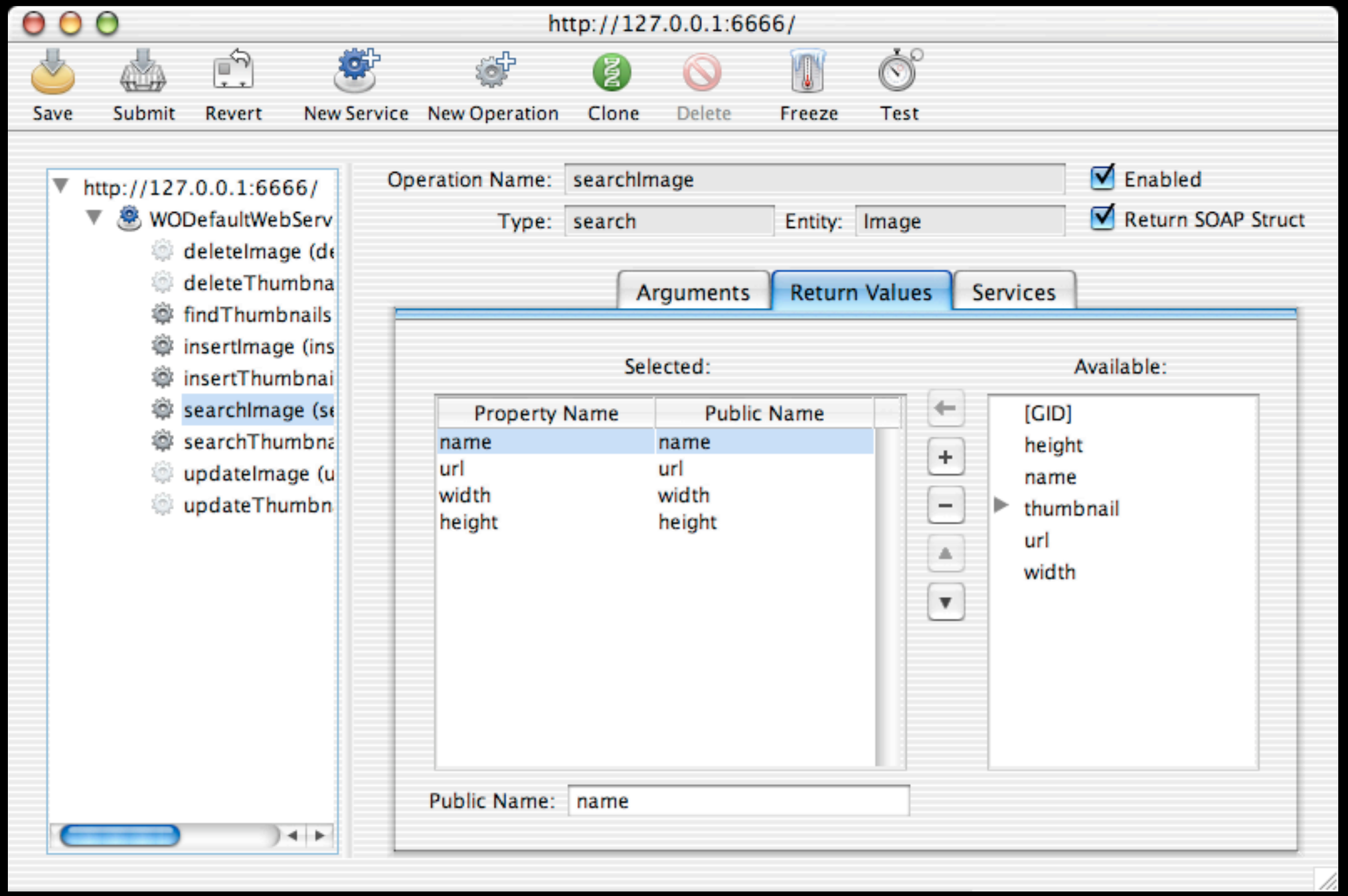


WebServices Assistant

Web Services Client

- Build or use web services
- Tools for configuration and testing
- Code-free generation of web services from existing data assets
- No need to worry about the details of XML, SOAP, or WSDL

Dynamic Web Services



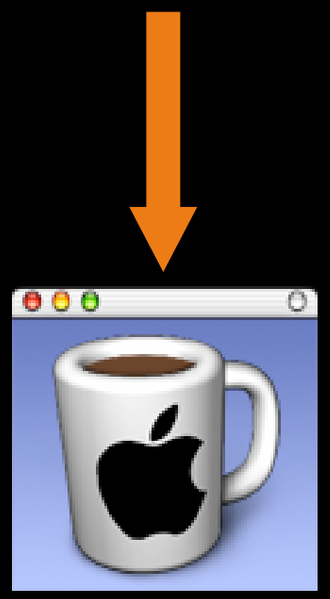
Web Services Clients

- Use web services from within WebObjects applications
- Web services are a built-in part of Mac OS X
- Tools automatically generate code from WSDL

Build Desktop Applications

- Direct to Java Client
- Tool for easily creating complex Swing (Java) widgets
- Java Web Start integration

Interface Builder



Java Application

Interface Builder File Edit Classes Layout Tools Window Help Wed 12:10 PM

Movie

Movie:

Title	Category	Date Released	Revenue	Poster Name	Trailer Name

Add
Remove

Title: Title
Category: Category
Date Released:
Revenue: Revenue
Poster: Poster
Trailer: Trailer

Cocoa-EnterpriseObjects

Movies.nib

Instances | Classes | Images | Sounds

File's Owner
First Responder
Movie
Talent
movieDirectors
movieRoles
photo
EditingContext
Movie Window

NSTableColumn Info

Connections

EOTableColumnA
Movie

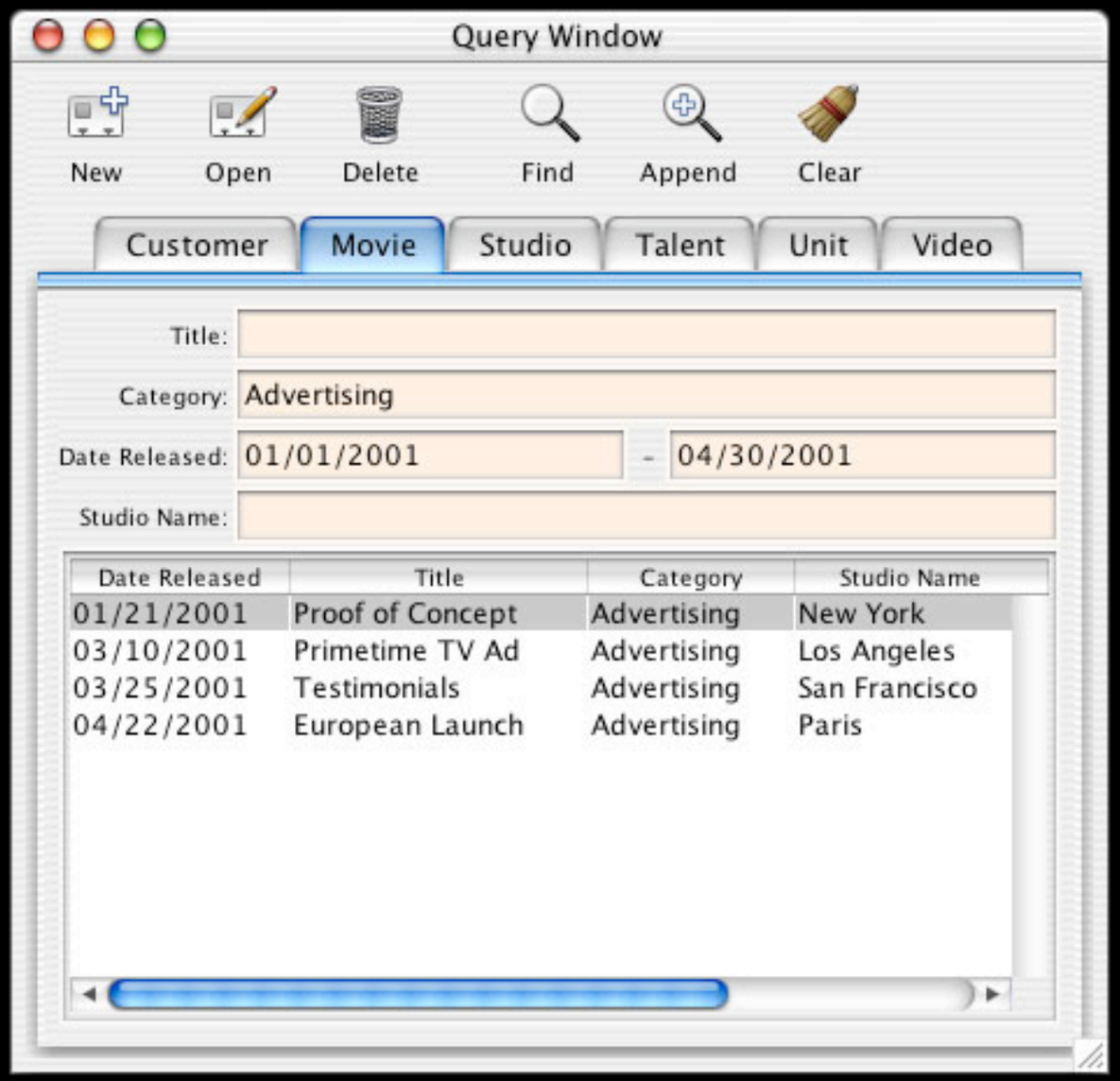
- value
- enabled
- textColor
- bold
- italic

dataCell
formatter

category
dateReleased
directors
movieID
plotSummary
posterName
rated
revenue
reviews

Source	Destination
value	dateReleased (Movie)

Revert
Disconnect

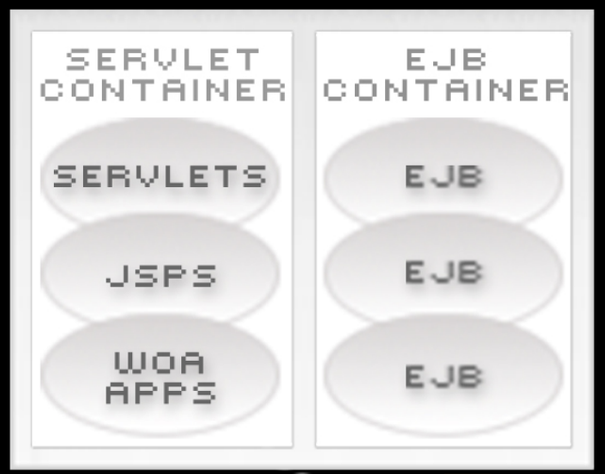


Rich Java Applications

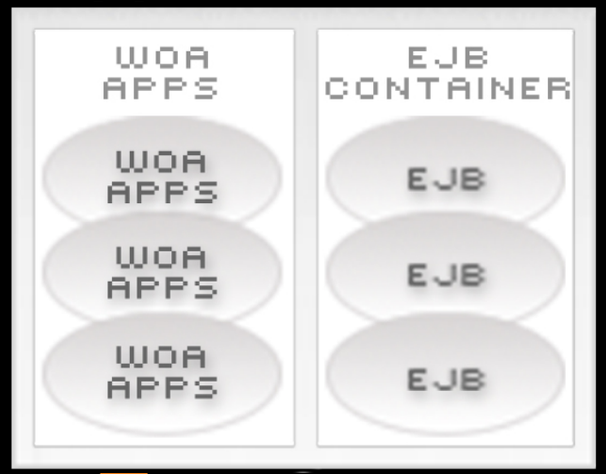
- Rich clients for a dynamic, interactive user experience
- Easy to balance performance and security

Flexible Deployment

J2EE Application Server



WebObjects Java Application Server

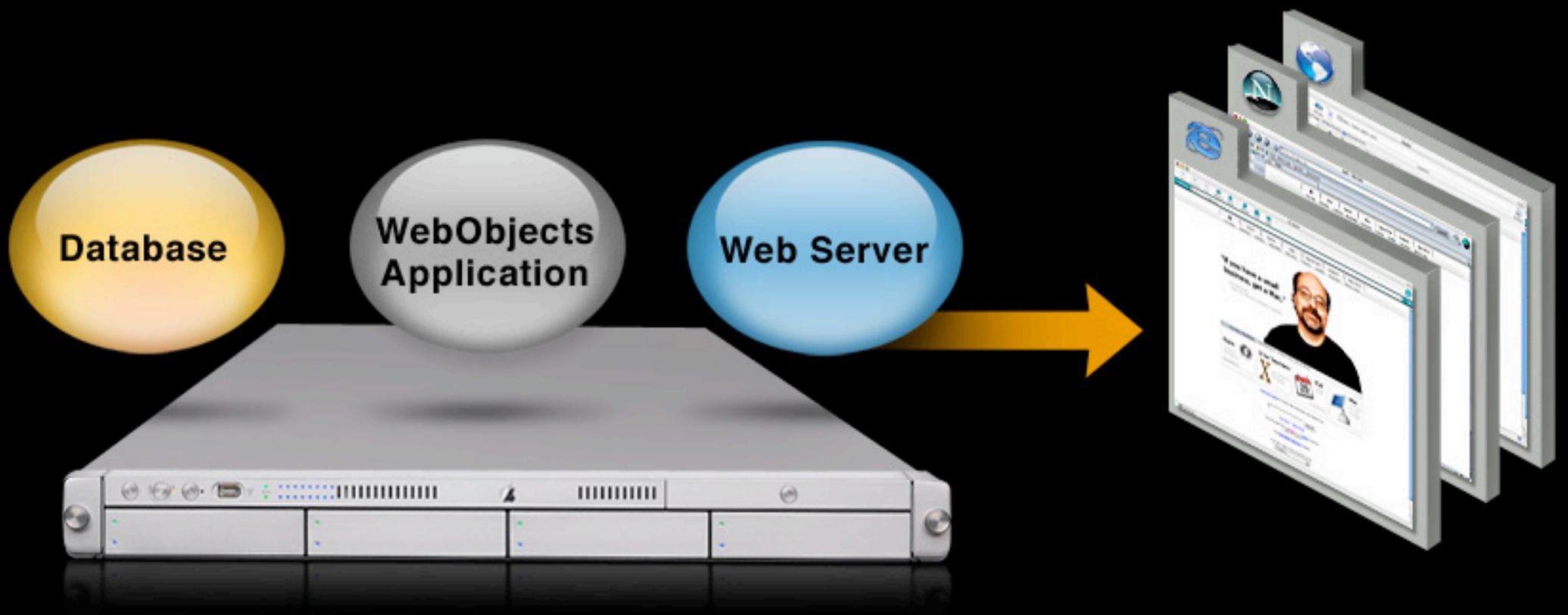


WebObjects Deployment

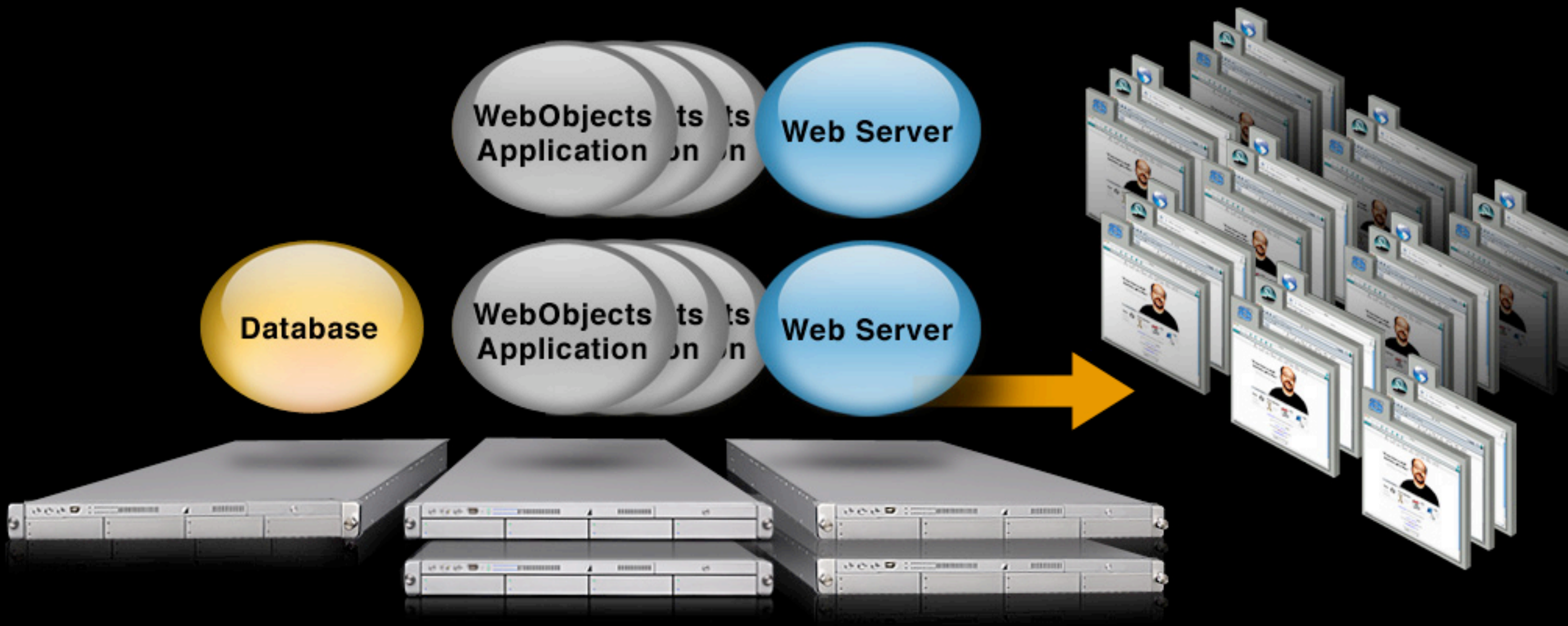
Cross-platform pure Java application server

- Built-in clustering support
  - Load balancing
  - Session management
  - Automatic application restart
- Remote configuration and monitoring tools
- Unlimited license included

Start Simple



Scale Easily



Free Trial Version

- 30-day trial version for Mac OS X
  - http://www.apple.com/webobjects/getting_started.html
- See “Web Services With WebObjects” article
  - http://developer.apple.com/internet/webservices/

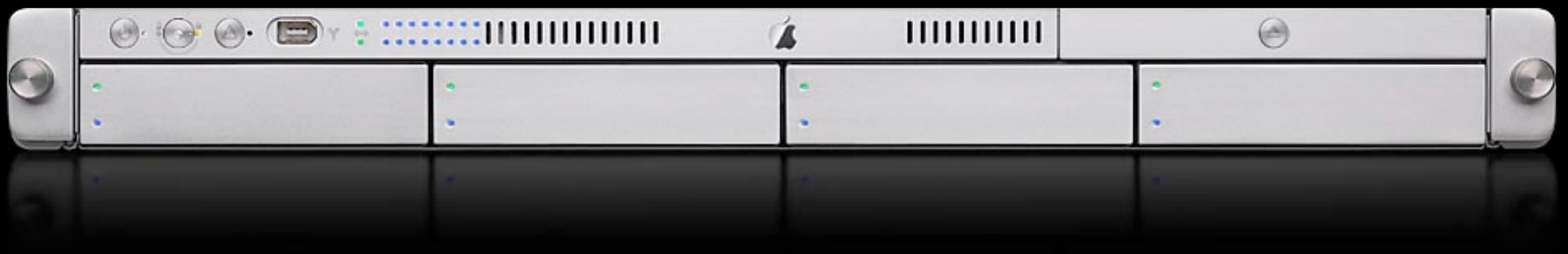
Pricing and Availability

- $699 (U.S. SRP)
- Includes both development and deployment
- For more information:
  www.apple.com/webobjects

WebObjects on Xserve

Xserve—A complete server solution with powerful capabilities and Apple's legendary ease of use

- Processing power and flexible storage in a rack-mountable 1U enclosure
- Enhanced server operating system with comprehensive, easy-to-use network services
- WebObjects deployment bundled with Mac OS X Server and Xserve



WebObjects in the News

WebObjects 5.2 Announced Nov ‘02

- Web Services
- Improved J2EE deployment of WebObjects applications
- Streaming file upload

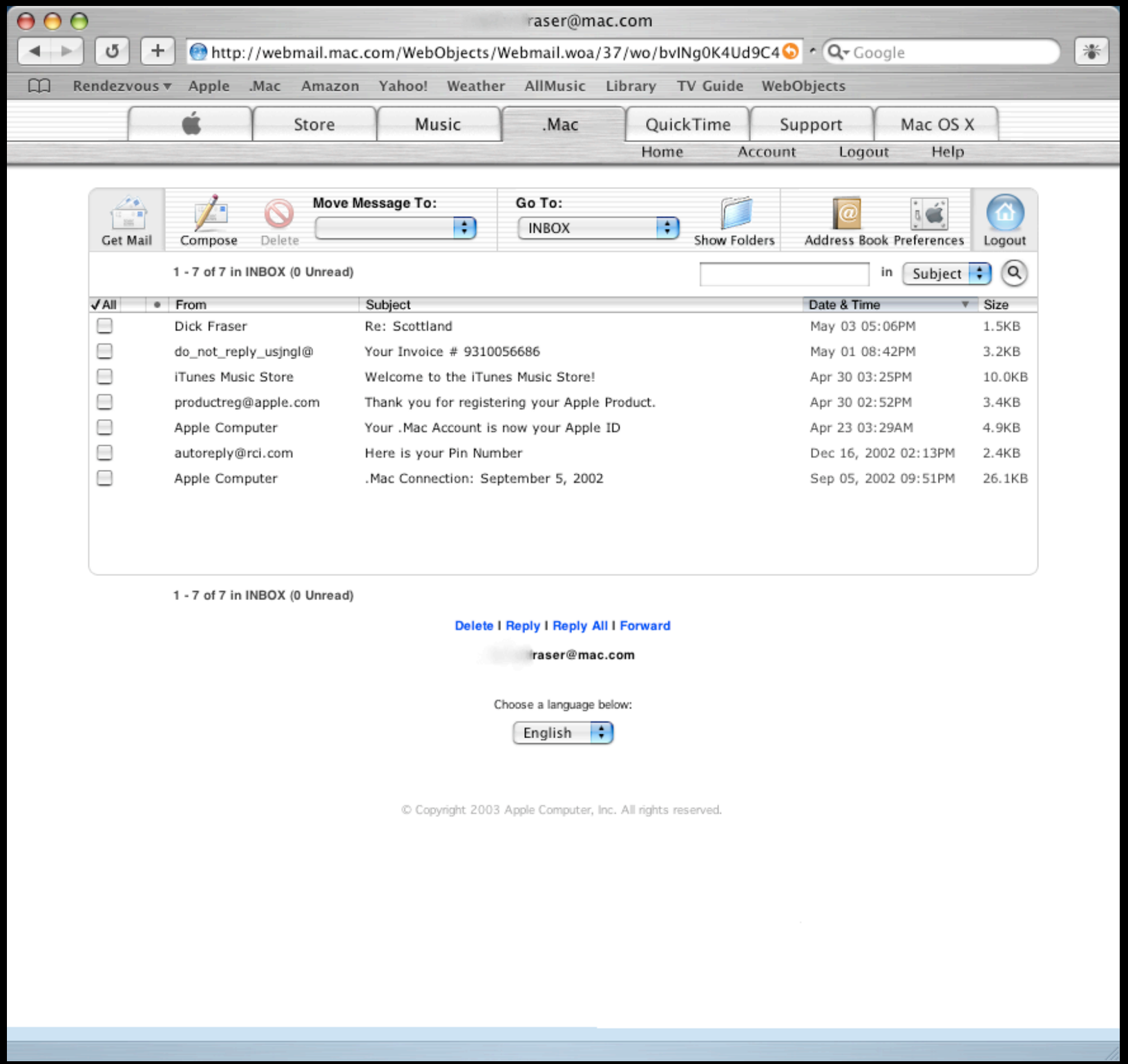
WebObjects in the Press

- eWEEK
  - “Apple 'Lowers the Bar' for Web Services Developers”
- InfoWorld
  - “Apple unveils Web services support in WebObjects 5.2”
- ZDNet
  - “Apple's WebObjects greets Web services”

WebObjects and Apple

- WebObjects used in dozens of internal applications
- WebObjects backs Apple’s Internet offerings

.mac Webmail


raser@mac.com
http://webmail.mac.com/WebObjects/Webmail.woa/37/wo/bvlNg0K4Ud9C4
Google
Rendezvous
Apple
.Mac
Amazon
Yahoo!
Weather
AllMusic
Library
TV Guide
WebObjects
Store
Music
.Mac
QuickTime
Support
Mac OS X
Home
Account
Logout
Help
Get Mail
Compose
Delete
Move Message To:
Go To:
INBOX
Show Folders
Address Book
Preferences
Logout
1 - 7 of 7 in INBOX (0 Unread)
in
Subject
All
From
Subject
Date & Time
Size
Dick Fraser
Re: Scottland
May 03 05:06PM
1.5KB
do_not_reply_usjngl@
Your Invoice # 9310056686
May 01 08:42PM
3.2KB
iTunes Music Store
Welcome to the iTunes Music Store!
Apr 30 03:25PM
10.0KB
productreg@apple.com
Thank you for registering your Apple Product.
Apr 30 02:52PM
3.4KB
Apple Computer
Your .Mac Account is now your Apple ID
Apr 23 03:29AM
4.9KB
autoreply@rci.com
Here is your Pin Number
Dec 16, 2002 02:13PM
2.4KB
Apple Computer
.Mac Connection: September 5, 2002
Sep 05, 2002 09:51PM
26.1KB
1 - 7 of 7 in INBOX (0 Unread)
Delete | Reply | Reply All | Forward
raser@mac.com
Choose a language below:
English
© Copyright 2003 Apple Computer, Inc. All rights reserved.

iTunes

Search Music Store

Browse

Source

- Library
- Radio
- Music Store
  - Shopping
  - Purchased
- Shared Musi
- 60's Music
- My Top Rate
- Recently Pla
- Top 25 Mos
- 80's Rock
- Acoustic Gu
- Blues
- Classical
- Country
- David Gray
- Easy Going
- Folk
- Jazz
- Metal/Rock
- Pop
- R&B
- Rock
- Soundtrack
- Southern Ro

Account: brentshank@mac.com

Choose Genre

Power Search
Browse
Requests & Feedback

Inside the Music Store
New Releases
Exclusive Tracks
Pre-Releases
Staff Favorites
Up & Coming
Buy an iPod

Featured Artists
Alanis Morissette
Coldplay
Jack Johnson
Fleetwood Mac
Andrea Bocelli
The Ataris
U2
Bob Dylan
The Flaming Lips

New Releases More

Meet the Girl Next...
Lil' Mo

Say You Will
Fleetwood Mac

Priceless
Kelly Price

The Very Best of ...
Cher

Exclusive Tracks More

Exclusive
Queens of the Ston...

Exclusive
Missy Elliott

Exclusive
Alicia Keys

Exclusive
Mariah Carey

Pre-Releases More

Top Song Downloads

1. **Clocks**
   Coldplay
2. **Stuck in a Moment...**
   U2
3. **Lose Yourself (So...**
   Eminem
4. **One I Love**
   Coldplay
5. **Soak Up the Sun**
   Sheryl Crow
6. **Beautiful Day (Liv...**
   U2
7. **Don't Know Why**
   Norah Jones
8. **In My Place**
   Coldplay
9. **I Will Follow (Live ...**
   U2
10. **The Scientist**
    Coldplay

More Top Songs

Top Album Downloads

1. **On and On**
   Jack Johnson
2. **Sea Change**
   Beck
3. **The Very Best of S...**

iTunes Music Store

- 5 million songs sold in the first eight weeks
- WebObjects 5.2, Xserve, Xserve RAID
  - http://maccentral.macworld.com/news/2003/06/02/xserve/

WebObjects Directions

Things Surrounding WebObjects

- Developer Tools
- Java VM
- Java Application Servers

Developer Tools

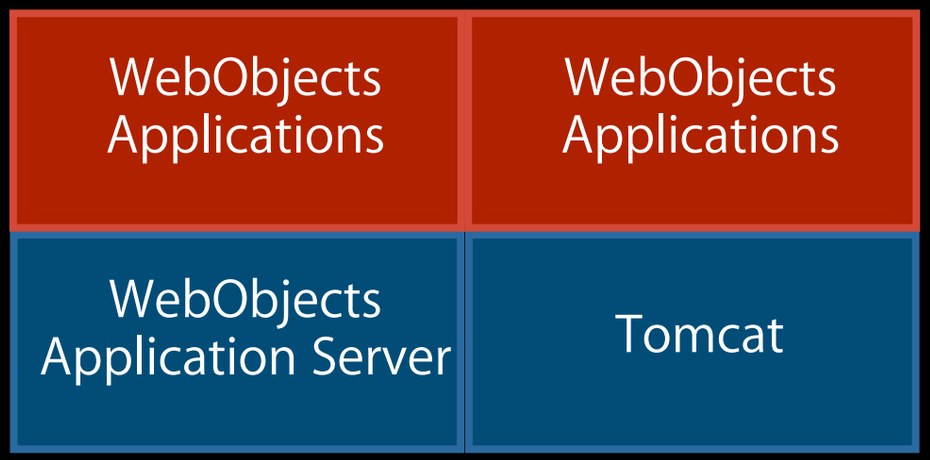
- Supported today by December 2002 Developer Tools
- WebObjects development supported by Xcode in Panther
- Xcode Preview Release incompatible with WebObjects

Java VM

- WebObjects applications supported under Java 1.3.1
- WebObjects 5.2.1 improves WebObjects compatibility with Java 1.4.1
- WebObjects applications will be supported under Java 1.4.1 in Panther

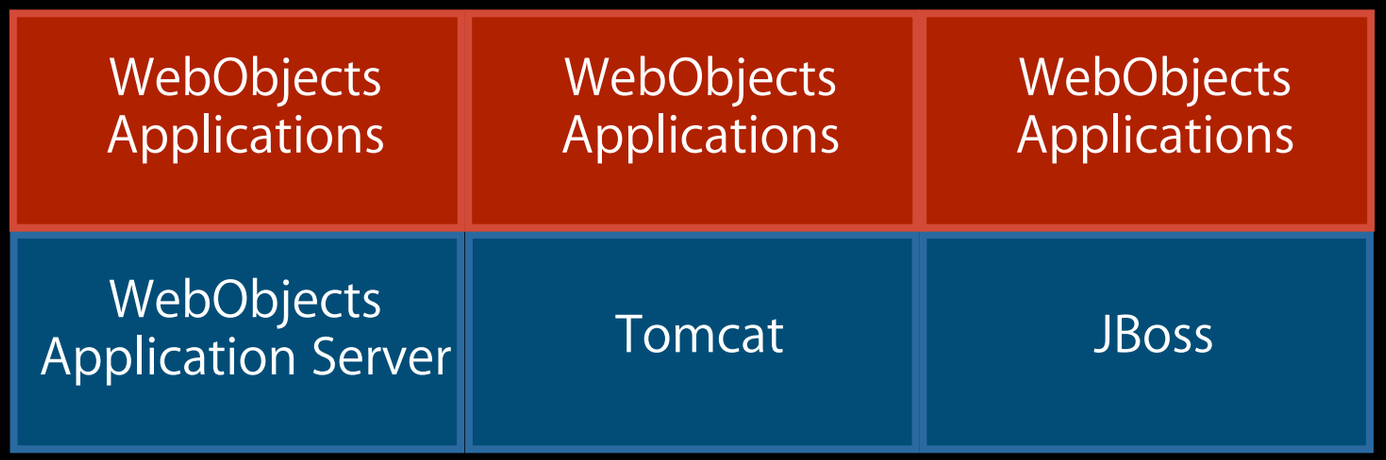
Java Application Servers

Shipped as part of Mac OS X Server



Java Application Servers

Shipped as Part of Panther Server



JBoss

Open Source Java application server

- #1 app server for J2EE development
- 2 Million downloads / yr and growing
- Supports important J2EE 1.3 technologies
  - EJB (including CMP and CMR), JMX, JCA, etc.
- Application hot deployment
- Clustering support

JBoss

Panther Server planned ease of use features

- Graphical Deployment tool
- Graphical Configuration and Management tool

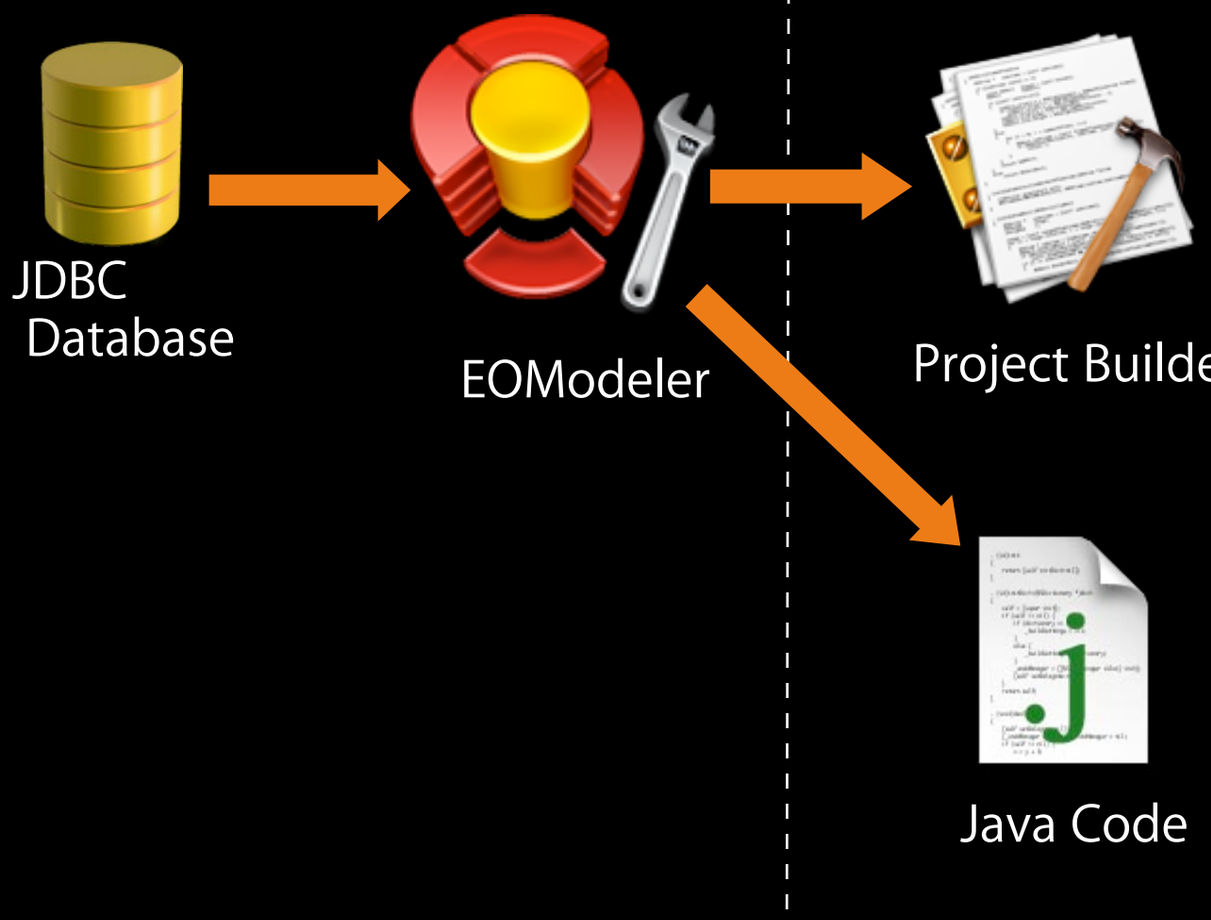
WebObjects 5.2.2

- Java 1.4.1 qualification
- JBoss on Panther Server Qualification
- WebObjects J2EE integration

WebObjects J2EE Integration

- JAR Bundles
- Log4j Logging
- JNDI Properties configuration
- JNDI Datasource mapping

WebObjects Development Workflow



Project Builder/Ant

- Integration with other open source projects
  - Ant
  - XDoclet

XDoclet

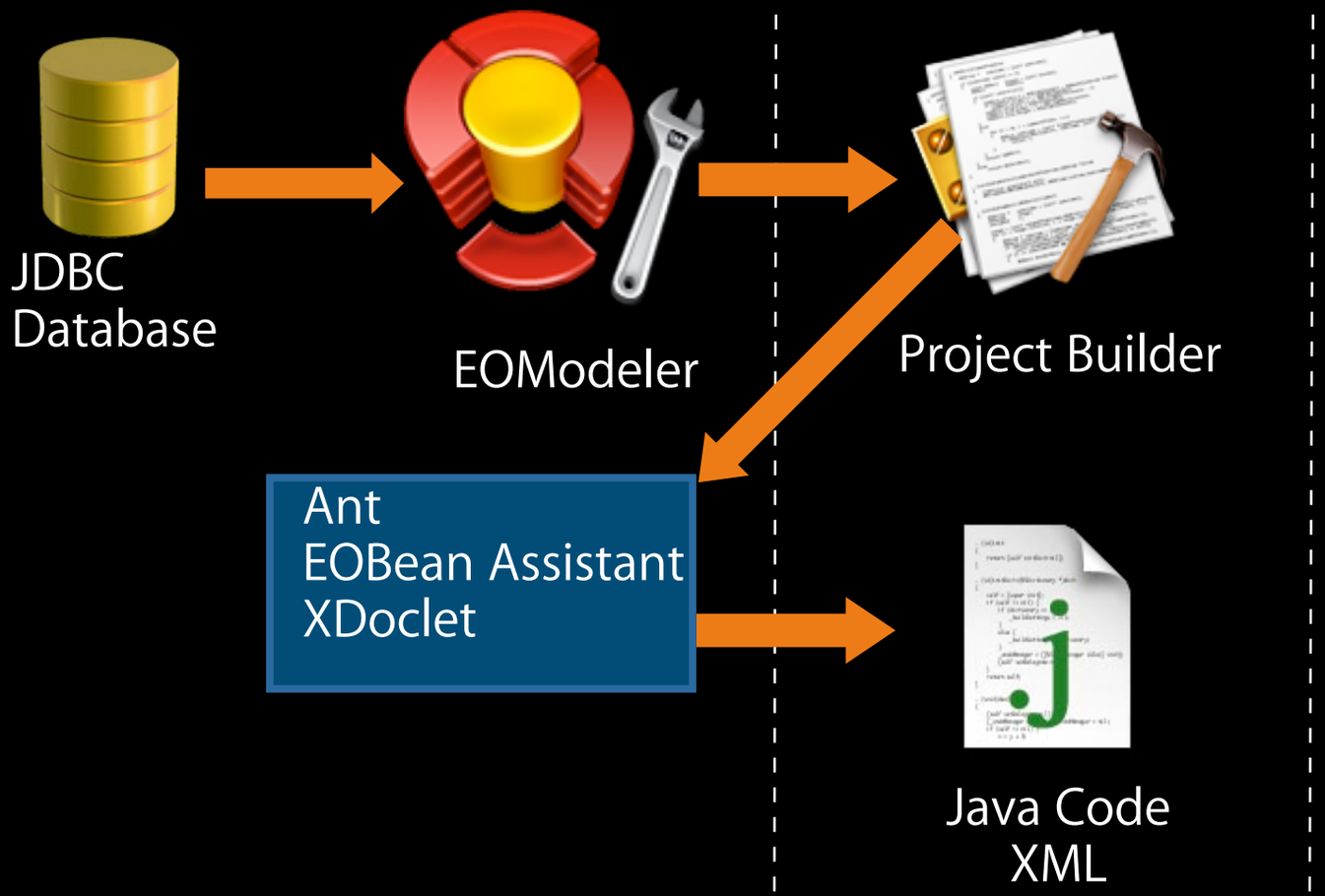
Aspect Oriented Programming

- Uses special Javadoc tags to add meta data
- Maintain 1 file instead of 5–10 or more
- Code /file generation engine
  - wars
  - ejbs
  - ears
  - xml deployment descriptors

EOBeanAssistant

- Create Entity Beans from EOModel files
- Command line version for automated builds

J2EE Development Workflow



Documentation State of the Union

Reference Library

Documentation

What's New in WebObjects 5.2?
ADC Home > Documentation > WebObjects >

Web Services
ADC Home > Documentation > WebObjects >

XML Serialization
ADC Home > Documentation > WebObjects >

Enterprise Objects
ADC Home > Documentation > WebObjects >

Reference Library

Documentation (continued)

Using EOModeler
ADC Home > Documentation > WebObjects >

Project Builder for WebObjects Developers
ADC Home > Documentation > WebObjects >

Web Applications
ADC Home > Documentation > WebObjects >

API Differences from 5.1
ADC Member Site > Documentation> WebObjects

Application Properties

Documentation

Apple's developer documentation includes overviews, tutorials, and details on application development with Apple technologies. Follow the links below to find documentation for a specific technology. Most documents are available in PDF and HTML formats.

Accessibility
Programming interfaces that support assistive technology applications, which help make the Macintosh accessible to all users.

Apple Applications
How other software products can interact with and extend applications like iTunes, Final Cut Pro, and Keynote.

AppleScript
The Mac OS X–native scripting language that allows users to directly control applications, and enables developers to make their applications scriptable.

Carbon
A set of procedural C APIs for developing full-featured, high-performance, highly reliable applications for Mac OS X.

Cocoa
A set of object-oriented application frameworks that support rapid development of full-featured, high-performance, highly reliable applications for Mac OS X.

Core Foundation
A framework that provides fundamental software services to applications and application environments.

Darwin
The open source foundation of Mac OS X, based on 4.4BSD

Device Drivers
The set of C++ classes that implement object-oriented

Games
Mac OS X technologies, including OpenGL, HID

New & Updated

Mac OS X Man Pages
2003-06-23

WebObjects 5.2 Release Notes
2003-06-23

Working With SCSI Architecture Model Devices
2003-06-23

Code Fragment Manager Reference
2003-06-17

Font Manager Reference
2003-06-16

ATSUI Reference
2003-06-12

WebObjects Documentation

WebObjects is Apple's suite of tools and object-oriented frameworks for creating and deploying scalable, reusable web and Java applications for the Internet and intranets. WebObjects supports the development, deployment, and extension of standards-based web services without the need to write low-level SOAP, XML or WSDL code. Tools enable code-free generation, configuration, and testing of web services from existing data assets.

WebObjects Resources

Fundamentals

WebObjects Overview

API Reference

API Differences from 5.1

WebObjects API Reference

Title	Date
WebObjects 5.2 Release Notes (HTML) (PDF)	2003-06-23
WebObjects Overview (HTML) (PDF)	2003-05-14
Deploying Applications (HTML) (PDF)	2003-04-01

New & Updated

WebObjects 5.2 Release Notes
2003-06-23

WebObjects Overview
2003-05-14

Related WebObjects Links

AppleCare Knowledge Base: WebObjects

OmniGroup WebObjects Mailing Lists

WebObjects Legacy Documentation

WebObjects Support Page

Title	Date
WebObjects 5.2 Release Notes (HTML) (PDF)	2003-06-23
WebObjects Overview (HTML) (PDF)	2003-05-14
Deploying Applications (HTML) (PDF)	2003-04-01
Web Applications (HTML) (PDF)	2003-04-01
What is New in WebObjects 5.2 (HTML) (PDF)	2003-03-01
WebObjects API Reference (HTML)	2003-02-21
Enterprise Objects (HTML) (PDF)	2003-02-01
XML Serialization (HTML) (PDF)	2003-02-01
Enterprise JavaBeans (HTML)	2003-01-01
JavaServer Pages and Servlets (HTML) (PDF)	2003-01-01
Application Properties (HTML) (PDF)	2002-12-01
API Differences from 5.1 (HTML)	2002-11-14
Developing WebObjects Applications With Direct to Web (HTML)	2002-11-01
Getting Started with WebObjects (HTML)	2002-11-01
Installation Guide for Mac OS X (HTML) (PDF)	2002-11-01
Installation Guide for Windows and Solaris (HTML) (PDF)	2002-11-01

Related WebObjects Links

AppleCare Knowledge Base: WebObjects

OmniGroup WebObjects Mailing Lists

WebObjects Legacy Documentation

WebObjects Support Page

WebServices with WebObjects

Reference Library Resources

Documentation FAQ

Documentation Feedback

Release Notes

Sample Code

Technical Notes

Technical Q&As

WebObjects Session Roadmap

603 WebObjects Technical Overview	Russian Hill Tuesday, 10:30am
605 WebObjects and J2EE	Pacific Heights Tuesday, 3:30pm
609 Rapid Application Development with WebObjects	Russian Hill Wednesday, 10:30am
612 Enterprise Application Deployment	Russian Hill Wednesday, 2:00pm

WebObjects Session Roadmap

614 WebObjects Reusable Components	Russian Hill Wednesday, 3:30pm
616 WebObjects EOF—Advanced Topics	Russian Hill Wednesday, 5:00pm
624 WebObjects—Creating Web Services	Nob Hill Friday, 3:30pm
FF007 WebObjects Feedback Forum	North Beach Thursday, 9:00am

Who to Contact

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For More Information

Reference Library

Resources

Product Information

http://www.apple.com/webobjects

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http://developer.apple.com/webobjects

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http://www.apple.com/services/technicalsupport

http://www.apple.com/services/consulting

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